

# Work Order ID 83341

**\*83341\***

Page 1

April-17-12 2:16:36 PM

Item ID: D2052

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Mounting Bracket

Stop **\*NS2\***

Start Date: 17/04/2012 Start Qty: 20.00

**\*20\***

Cust Item ID:

Required Date: 01/05/2012 Req'd Qty: 20.00

**\*20\***

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 12/04/12 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2052	Rev'D

100

0.00

**\*100\***

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D2052

Dwg Rev: 0

Prog Rev: 0

\*\*\*\*grain direction along 3.878" \*\*\*\*

2-Deburr if necessary

5052.090

21 0 Jm 12-4-29

110

0.00

**\*110\***

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

21 0 Jm 12-4-29

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 83341

April-17-12 2:16:36 PM

**\*83341\***

Page 2

Item ID: D2052 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Mounting Bracket  
 Start Date: 17/04/2012 Start Qty: 20.00 **\*20\*** Cust Item ID:  
 Required Date: 01/05/2012 Req'd Qty: 20.00 **\*20\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 <b>*120*</b> QC Quality Control	QC8- Inspect parts - second check  Memo	0.00 0.00				counted (72)			
130 <b>*130*</b> Brake NC Brake NC	NC BRAKE  Memo Form as per Dwg D2052 using CNC Brake	0.00 0.00				21			SS 12/05/12
140 <b>*140*</b> QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00				counted (72)			

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 83341

**\*83341\***

Page 3

April-17-12 2:16:36 PM

Item ID: D2052 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Mounting Bracket  
 Start Date: 17/04/2012 Start Qty: 20.00 **\*20\*** Cust Item ID:  
 Required Date: 01/05/2012 Req'd Qty: 20.00 **\*20\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150	Chemical Conversion Coat per QSI005 4.1	0.00							
<b>*150*</b>									
HandFinish	Memo	0.00							
Hand Finishing									

160	Black Sandtex(Ref:4.3.5.7) per QSI005 4.3	0.00							
<b>*160*</b>									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 8:30 OVEN TEMPERATURE: 320 °F FINISH TIME: 9:00								

170	QC3- Inspect Part Finish	0.00							
<b>*170*</b>									
QC	Memo	0.00							
Quality Control									

Handwritten notes and signatures:

- 20 125-2
- 21 X 125-2
- 21 125-7
- 12/5/07
- 11/7/38

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 83341

April-17-12 2:16:36 PM

**\*83341\***

Page 4

Item ID: D2052 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Mounting Bracket  
 Start Date: 17/04/2012 Start Qty: 20.00 **\*20\*** Cust Item ID:  
 Required Date: 01/05/2012 Req'd Qty: 20.00 **\*20\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Identify as per dwg & Stock Location: <b>SGA</b>	0.00							
<b>*180*</b>									
Packaging	Memo	0.00							
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
<b>*190*</b>									
QC	Memo	0.00							
Quality Control									

**26x** **SP**  
**12-5-8**

**12/5/8**

**12058**

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

April-17-12 2:16:40 PM

Page 1

Work Order ID: 83341

\*83341\*

Parent Item: D2052

\*D2052\*

Parent Item Name: Mounting Bracket

Start Date: 17/04/2012

Required Date: 01/05/2012

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP C01.08.21 Added Finishing SM(Issue this IPP with part number D2053)  
 IPP Rev:D now water jet 07-10-25 DD  
 IPP Rev:E 08-05-14 chg to revD as per ECN1171 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M5052H32S.090		Purchased	No			100	sf	26.1200	0.129	2.715789			

\*M5052H32S 090\*

5052-H32 .090 Sheet

\*\*

Location

Loc Qty

Loc Code

MAT022

26.12

118641

11.22

3019

14.9

3019

JM  
12-4-28

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



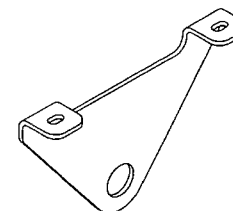
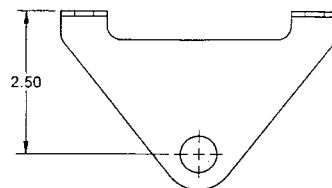
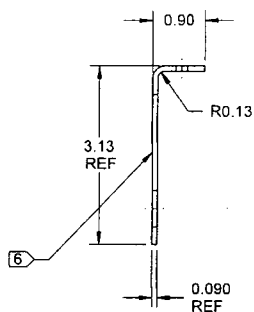
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

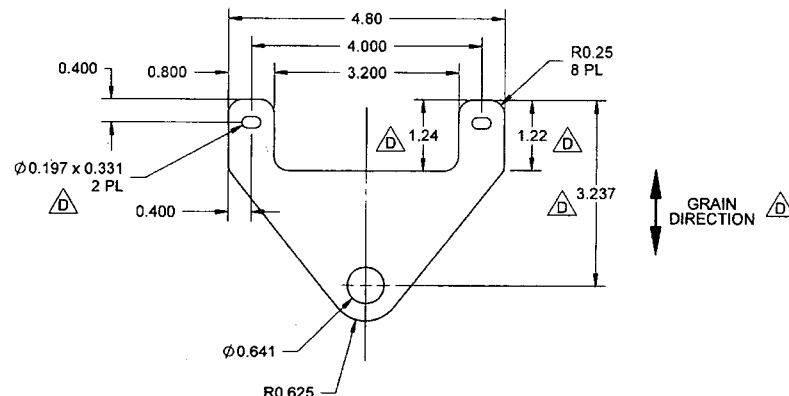
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D2052 BRACKET**



**D2052F FLAT PATTERN**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 82341 MLJ  
12/04/17

RELEASED  
08-05-17/17

**NOTES:**

- 1) MATERIAL: 5052-H32 ALUMINUM SHEET 0.090 THICK PER QQ-A-250/8 OR AMS 4016 (REF DART SPEC M5052H32S.090) OR 6061-T6 (OR-T62) ALUMINUM SHEET 0.090 THICK PER QQ-A-250/11 OR AMS 4025/4027 (REF DART SPEC M6061T6S.090)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT BLACK SANDEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2052" USING FINE POINT PERMANENT INK MARKER OR LABEL AFTER FINISH
- 7) WEIGHT: 0.08 lbs

D	WIDEN SLOT (ZN B7-1); UPDATE FLAT PATTERN DIMENSIONS (ZN B5-1, B6-1); ADD 6061-T6 OPTION (ZN A5-1); ADD CHEMICAL CONVERSION COAT AND CHANGE TO BLACK SANDEX (ZN A5-1); ADD IDENTIFICATION (ZN A4-1); ADD WEIGHT (ZN A8-1); ADD GRAIN DIRECTION (ZN B4-1); REASON: PRODUCT IMPROVEMENT (REF PAR 08-012)	PH	08.04.28
C	ADD FLAT PATTERN	RF	99.04.30
B	ADD SLOT TO FOOT	BW	97.02.21
A	NEW ISSUE	BW	92.01.12
REV.	DESCRIPTION	BY	DATE
DESIGN	BW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AW		
CHECKED	CP	DRAWING NO.	REV. D
MFG. APPR.	MS	D2052	SHEET 1 OF 1
APPROVED	MS	TITLE	SCALE
DE APPR.	MS	BRACKET	NTS
DATE	08.04.28	COPYRIGHT © 1992 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries